

Product Information

VESTAMID® E62-S1

HEAT-STABILIZED COMPOUND BASED ON POLYAMIDE 12 ELASTOMER FOR MOLDING OF SPORT SHOE SOLES

VESTAMID® E62-S1 is a PA 12 elastomer consisting of PA 12 segments and softening segments. The material is free of volatile or migrating plasticizer.

The VESTAMID® E represent thermoplastic elastomers generically characterized as polyether block copolyamides (PEBA) consisting of PA 12 and polyether segments.

VESTAMID® E62-S1 is especially developed for sport shoe soles. It has good impact strength at low temperatures.

VESTAMID® E62-S1 is supplied as cylindrical pellets in moisture-proof packaging, ready for processing.

The process temperatures should be within a range of 190°C – 230°C.

Pigmentation may affect values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

Key Features

Industrial Sector

Sustainable, Industry and Engineering, Sports and Lifestyle

Sustainability

Sustainable electricity

Processing

Injection molding

Delivery form

Pellets, Granules

Optics

Translucent

Resistance to

Hydrolysis / hot water, Wear / abrasion, Fatigue resistance

Additives

Unfilled

LCA-values	dry	Unit	Test Standard
LCA name of certificate	VESTAMID® E mix	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	14.2	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	6.5	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	6.5	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-1.6	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	389 / -	MPa	ISO 527
Tensile strength	23 / -	MPa	ISO 527
Yield stress	23 / -	MPa	ISO 527
Yield strain	32 / -	%	ISO 527
Stress at 50% strain	23 / -	MPa	ISO 527
Stress at break	40 / -	MPa	ISO 527
Nominal strain at break, tB	270 / -	%	ISO 527
Charpy impact strength, +23°C	N / -	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	121 / -	kJ/m ²	ISO 179/1eA
Type of failure	P / -	-	-
Charpy notched impact strength, -30°C	8 / -	kJ/m ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	366 / -	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	13 / -	MPa	ISO 178
Flexural strength, 23°C	19 / -	MPa	ISO 178
Flexural strain at flexural strength, 23°C	9 / -	%	ISO 178

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	172 / *	°C	ISO 11357-1/-3
Glass transition temperature, DSC	10 / *	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	45 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	100 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	165 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	110 / *	°C	ISO 306
Melting Temperature	172	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1030 / -	kg/m ³	ISO 1183
Water absorption	1.1 / *	%	Sim. to ISO 62
Humidity absorption	0.5 / *	%	Sim. to ISO 62
Shore D hardness	61 ^[b] / -	-	ISO 7619-1
Density	1030	kg/m ³	ASTM D 792

b: 3 seconds

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	2E10 / 2.5E9	Ohm*m	IEC 62631-3-1
Surface resistivity, C, circular electrodes	- / 3E13	Ohm per square	IEC 62631-3-2
Relative permittivity, 100Hz	9 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	4 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	1000 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	1200 / -	E-4	IEC 62631-2-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	20 / *	cm ³ /10min	ISO 1133
Temperature	240 / *	°C	-
Load	2.16 / *	kg	-

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Molding shrinkage, parallel	0.8 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.4 / *	%	ISO 294-4, 2577
Mold temperature	35 / *	°C	-
Melt temperature	200 / *	°C	-

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	220	°C	ISO 294
Injection Molding, mold temperature	35	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

Characteristics

Additives

Heat stabilizer